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(54) **EFFICIENT UPLINK DATA INDICATION TECHNIQUES FOR MIMO-OFDMA TRANSMISSION IN WLAN**

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(57) **ABSTRACT**

Uplink data indication transmission(s) are received over a subband and over OFDM symbol(s) from STA(s) in a wireless communication system. The received uplink data indication transmission(s) are decoded to determine a unique codeword for each of the STA(s). From the determined unique codewords and using a mapping between station IDs and codewords in a codebook, a unique station ID is determined for each of the STA(s). For STA(s) determined to have sent the uplink data indication, other operations are performed to prepare for subsequent reception of uplink data from the STA(s) determined to have sent the uplink data indication.